

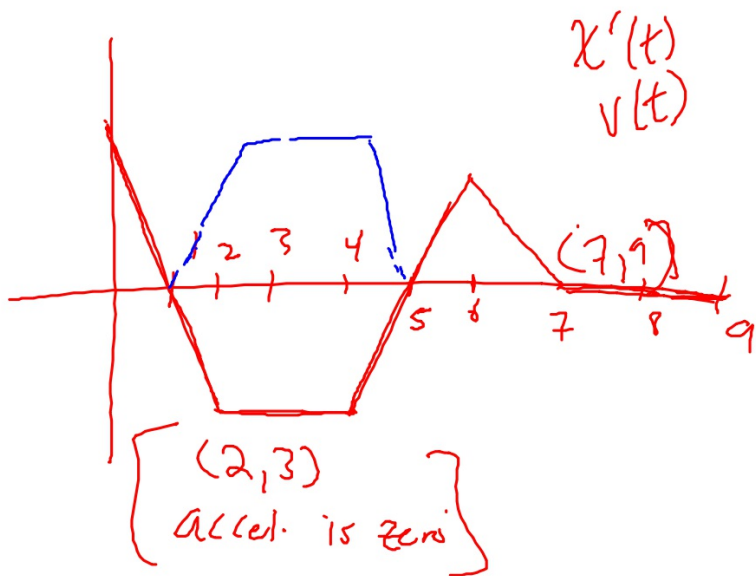
- Related Rates packet

- Take-Home Tests Returned Mon.

- Marginal Cost,

Generic Velocity graph

HW
Velocity Packet
6, 8, 9,
24, 28
(~~to~~ ^{due} Tuesday)



(a)

FWD: (0,1) (5,7)

BLK: (1,5)

spd up: (1,2) (5,6)

slw dn: (0,1) (6,7)

"velocity is decreasing"

→ slope of v is negative

$$C(x) = 2000 + 100x - 0.1x^2$$

$$a.) C(100) = \$11,000$$

$$x [0, 100]$$

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{9000}{100} = \$90$$

$$C(x) [2000, 11,000]$$

b.) Marginal Cost

$$C'(x) = 100 - 0.2x$$

$$C'(100) = 100 - 0.2(100)$$

$$= \textcircled{80}$$

$$C(x) = 2000 + 100x - 0.1x^2$$

$$\frac{d}{dt} \frac{dC}{dt} = 100 \frac{dx}{dt} - 0.2x \cdot \frac{dx}{dt}$$